Service Schematics

NOKIA 7360

RM-127

Introduction

IMPORTANT:

This document is intended for use by authorized NOKIA service centers only.

“Service Schematics” was created with focus on customer care.
The purpose of this document is to provide further technical repair information for NOKIA mobile phones on Level 3/4 service activities.
It contains additional information such as e.g. “Component finder”, “Frequency band table” or “Antenna switch table”.
The “Signal overview” page gives a good and fast overview about the most important signals and voltages on board.
Saving process time and improving the repair quality is the aim of this document.
It is to be used additionally to the service manual and other training or service information such as Service Bulletins.

All measurements were made using following equipment:

Nokia repair SW	:	Phoenix version 2005.20.7.98
Oscilloscope	:	Fluke PM 3380A/B
Spectrum Analyzer	:	Advantest R3162 with an analog probe
RF-Generator / GSM Tester	:	Rhode & Schwarz CMU 200
Multimeter	:	Fluke 73 Series II

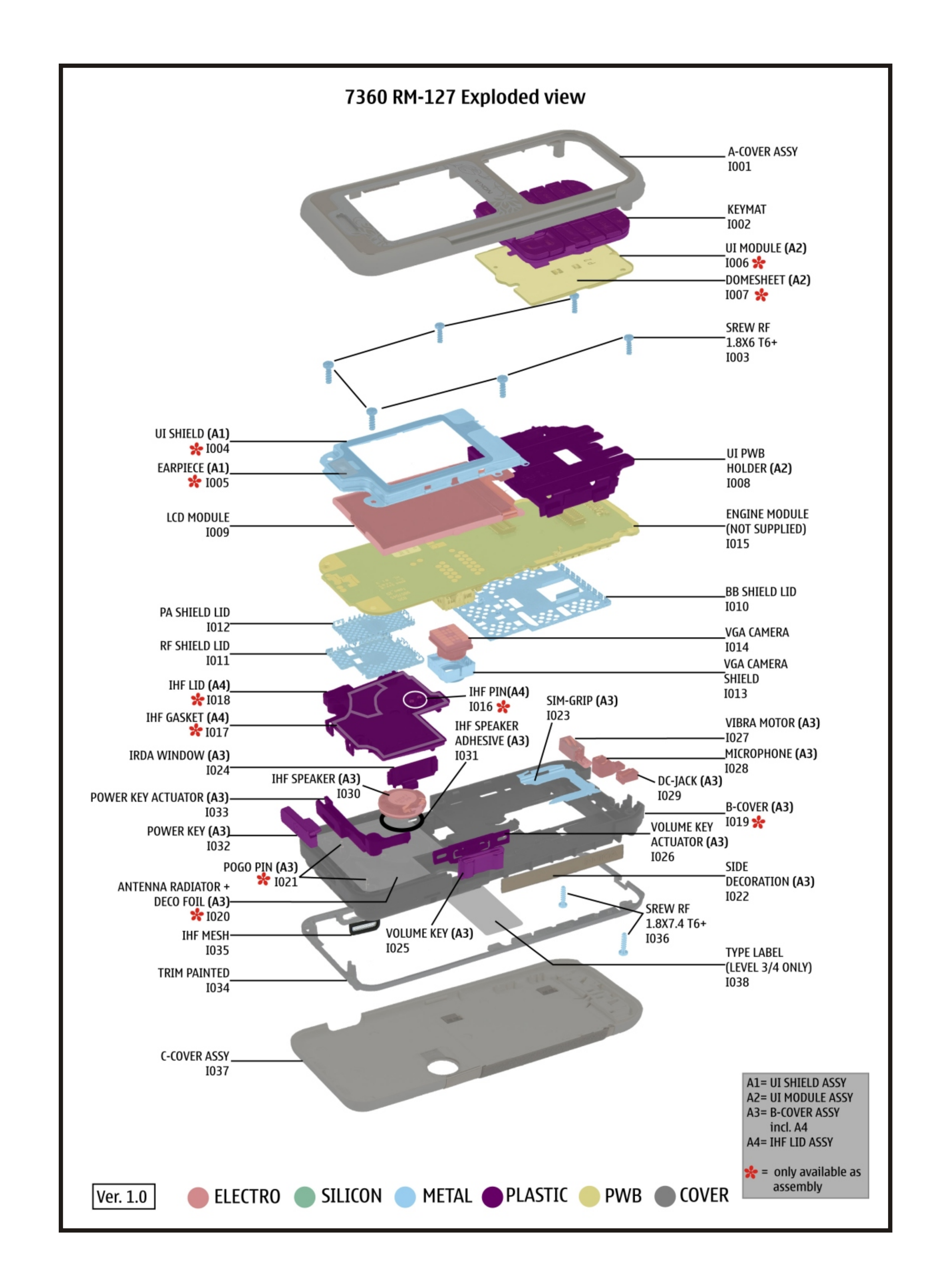
While every endeavour has been made to ensure the accuracy of this document, some errors may exist. If the reader finds any errors, NOKIA should be notified in writing.

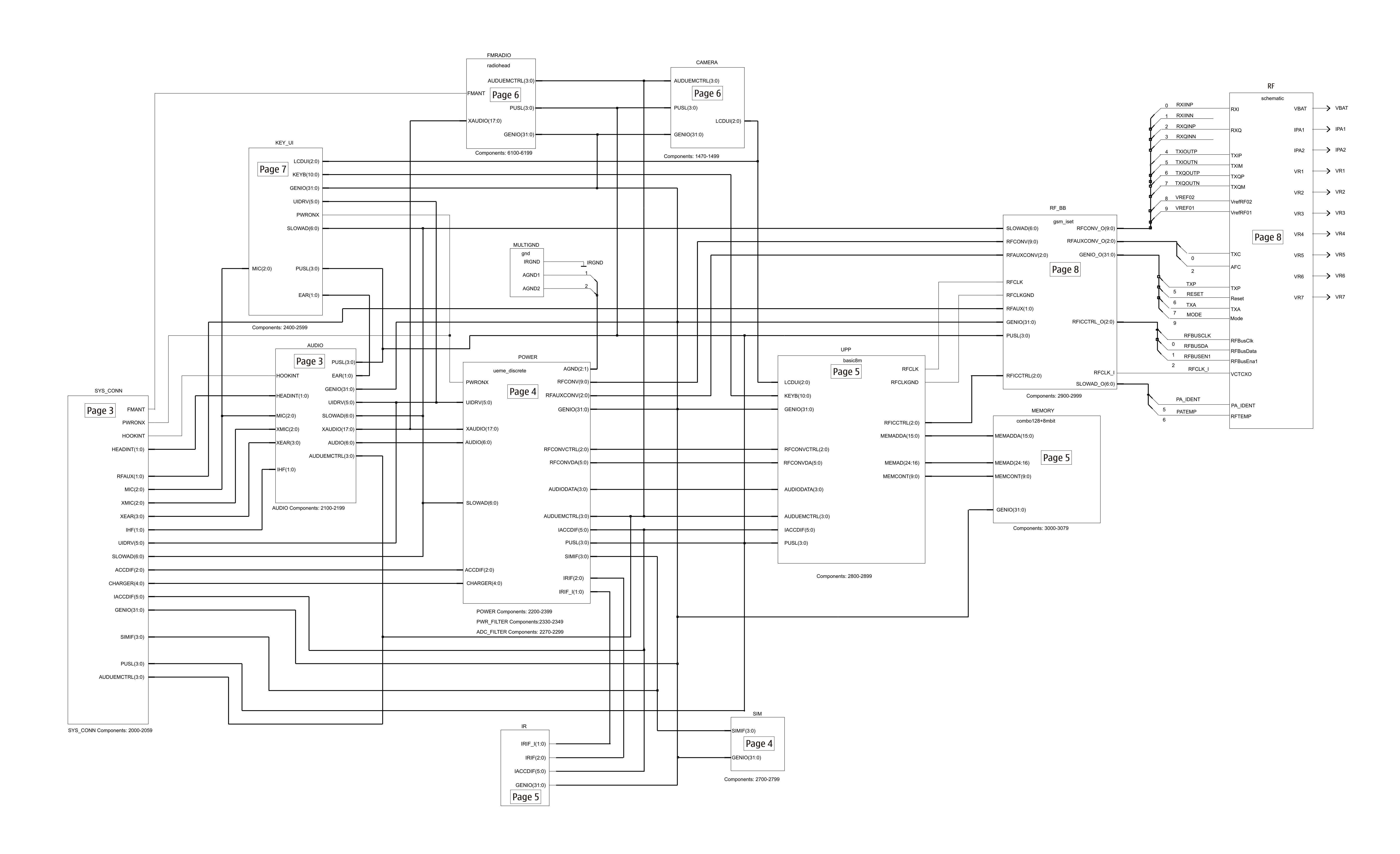
Please send E-Mail to: training.sace@nokia.com

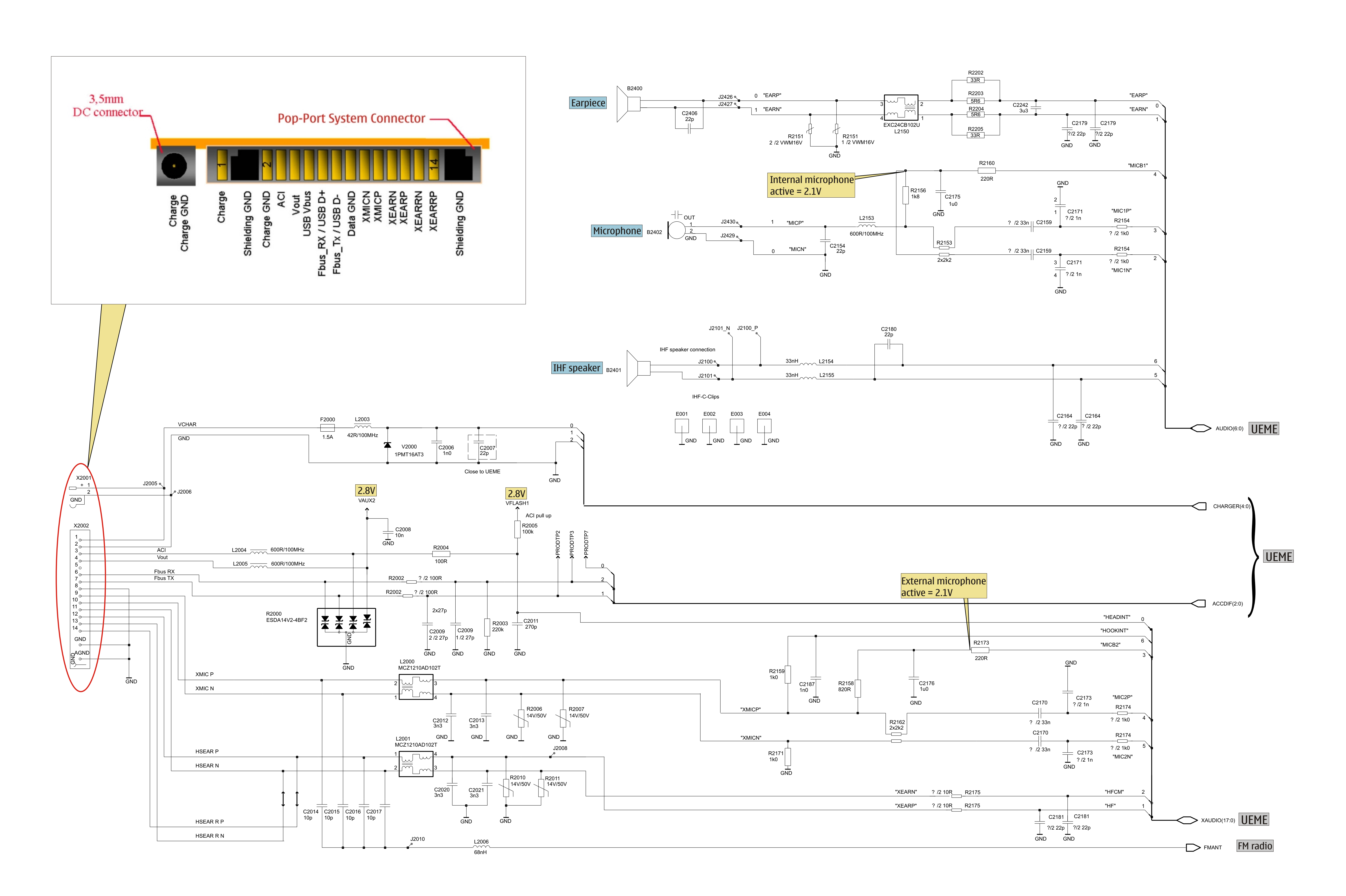


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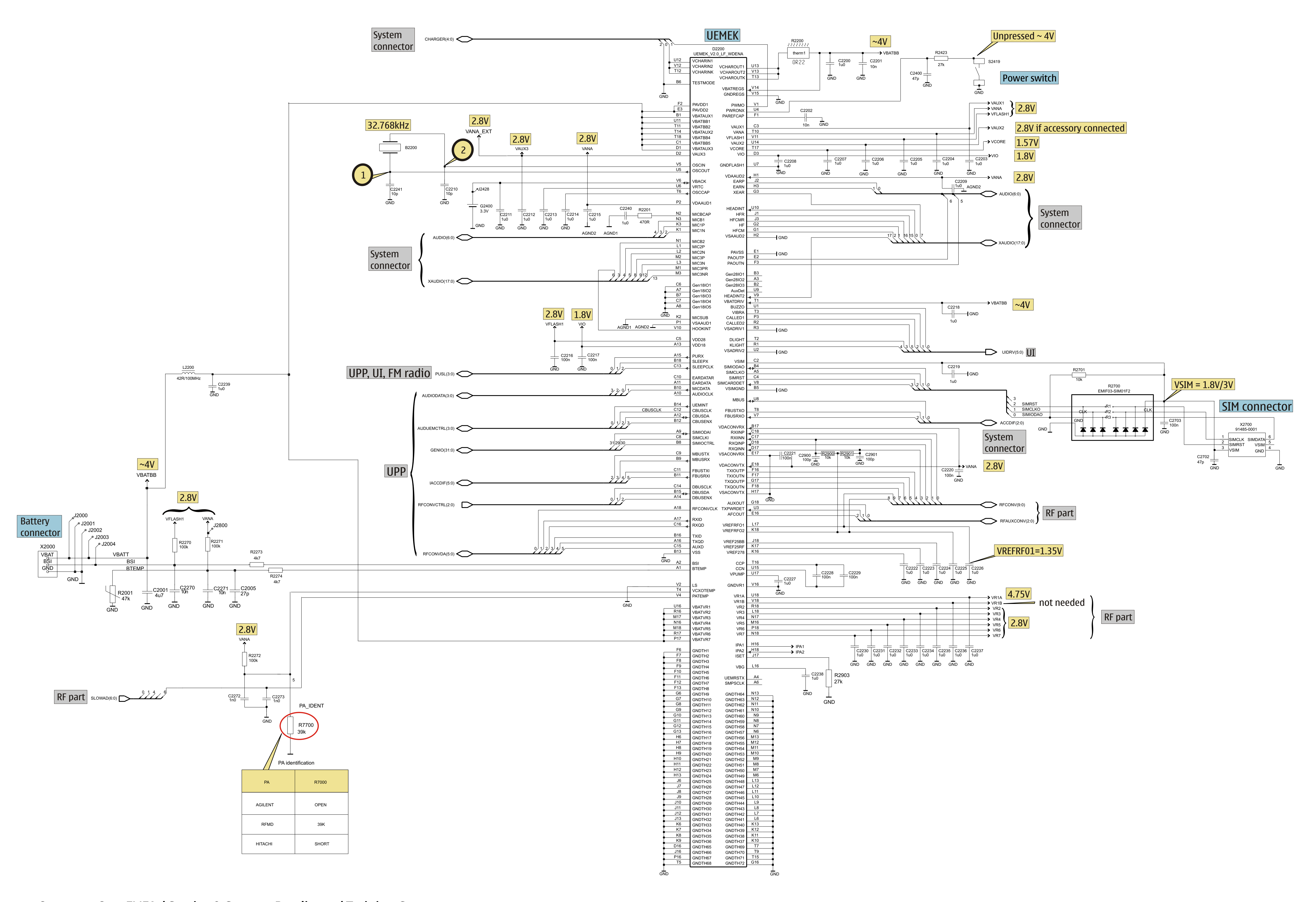
Exploded view and component disposal



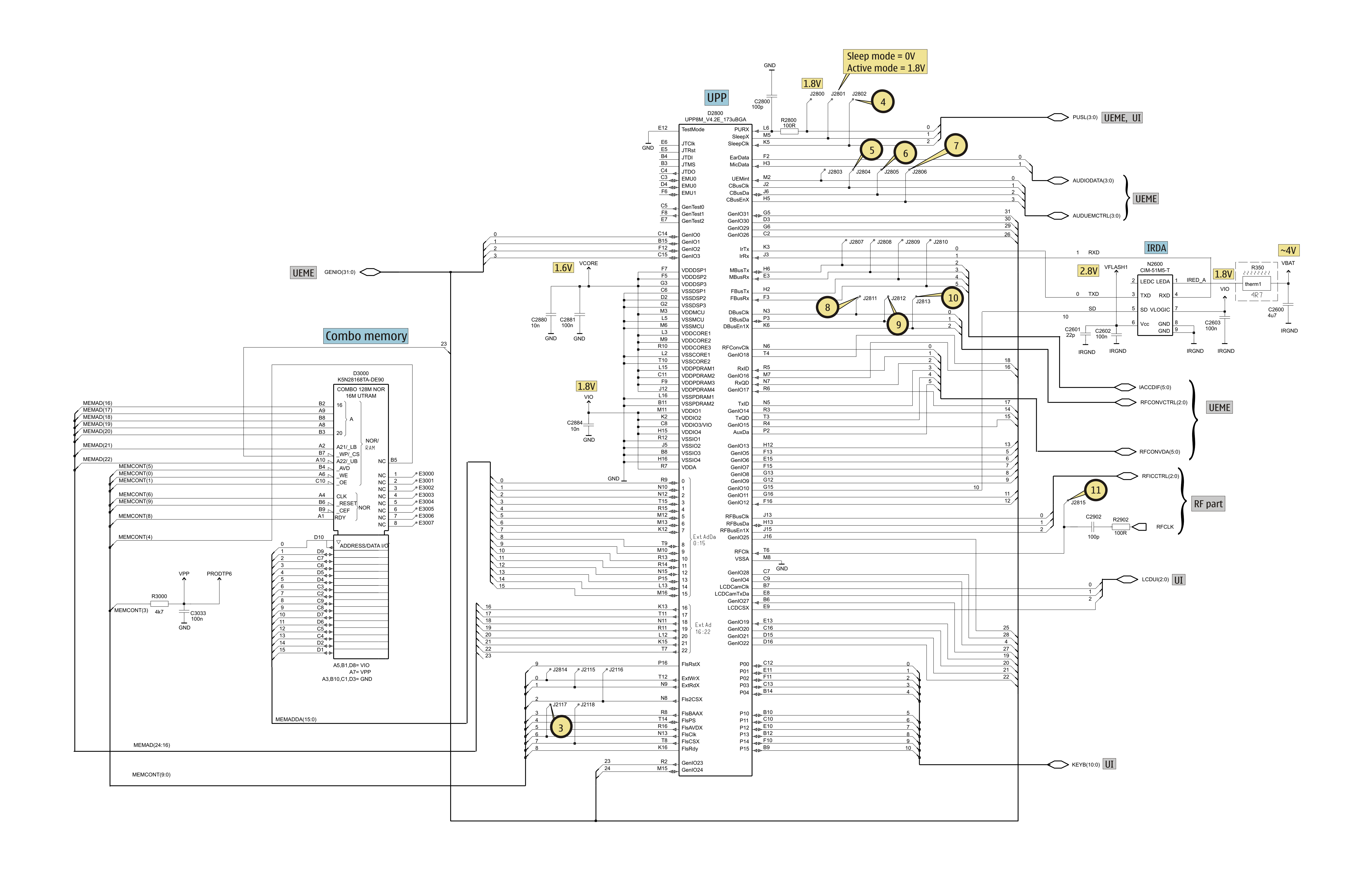




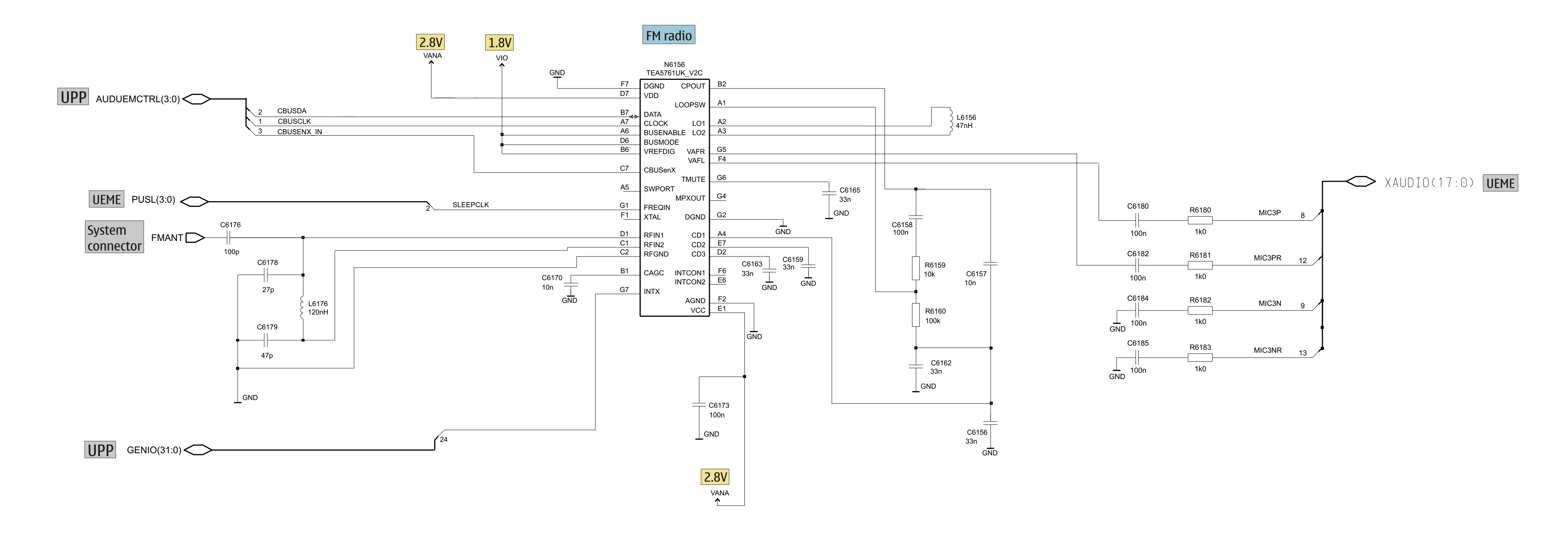
3,5mm DC connector
Pop-Port System Connector
Charge
Charge GND
Charge
Shielding GND
Charge GND
ACI
Vout
USB Vbus
Fbus_RX / USB D+
Fbus_Tx / USB D-
Data GND
XMICN
XMICP
XEARN
XEARP
XEARRN
XEARRP
Shielding GND
Earpiece
Microphone
IHF speaker
Internal microphone active = 2.1V
External microphone active = 2.1V
2.8V
2.8V
UEME
UEME
UEME
FM radio



PA	R7000
AGILENT	OPEN
RFMD	39K
HITACHI	SHORT



Sleep mode = 0V
Active mode = 1.8V
1.8V
UPP
D2800
UPP8M_V4.2E_173uBGA
PUSL(3:0)
UEME, UI
AUDIODATA(3:0)
AUDUEMCTRL(3:0)
UEME
IRDA
~4V
N2600
CIM-51M5-T
2.8V
1.8V
VFLASH1
VBAT
GENIO(31:0)
UEME
1.6V
VCORE
Combo memory
D3000
K5N28168TA-DE90
COMBO 128M NOR
16M UTRAM
IACCDIF(5:0)
RFCONVCTRL(2:0)
RFCONVDA(5:0)
UEME
RFICCTRL(2:0)
RF part
RFCLK
LCDUI(2:0)
UI
KEYB(10:0)
UI
MEMAD(24:16)
MEMCONT(9:0)
MEMADDA(15:0)
A5,B1,D8= VIO
A7= VPP
A3,B10,C1,D3= GND



HW accelerator

D1470
STV0900BE

UI, UPP LCDUI(2:0)

UPP GENIO(31:0)

LCDCamTxDa

LCDCamClk

12

1.8V J1470 J1471 J1472 J1473 J1474

CE CLK RSTN MSCL MSDA SSCL SSDA DAS TXDA RXDA CSX DACLK RDP RDN RQP RQN RB TQP TQN TDP TDN TB PLLVDD PLLVSS VDD2.8V

TM1 TM2 TM3 TPio0 TPio1 TPio2 TPio3 TPio4 TPio5 TPio6 TPio7 TPio8 TPio9 TPio10 DC2 DC3 DC1 VDD1.8V

A4,A7,C4,H4,H5,E10,K3,K9= GND

R1470 15k

R1471 100R

R1472 100R

C1470 10n

1.8V VCAMDIG

2.8V VANA_EXT

R1473 10k

C1475 10n

C1478 10n

C1476 10n

C1477 10n

C1480 10n

C1479 100n

VCAMDIG 1.8V

1.8V VCAMDIG

R1474 4k7

R1475 4k7

2.8V VANA_EXT

C1471 27p

C1472 100n

Camera

X1470
CLE9014-01E

SHIELD AGND VANA XSHUTDOWN EXTCLK CCISCL CCISDA

DGND CCPDATAP CCPDATAN VDIG CCPCLKP CCPCLKN DGND

SHIELD PADS

XSHUTDOWN EXTCLK CCISCL CCISDA

CCPCLKN CCPCLKP CCPDATAN CCPDATAP

1.8V VCAMDIG

C1473 1u0

C1474 27p

~4V VBAT

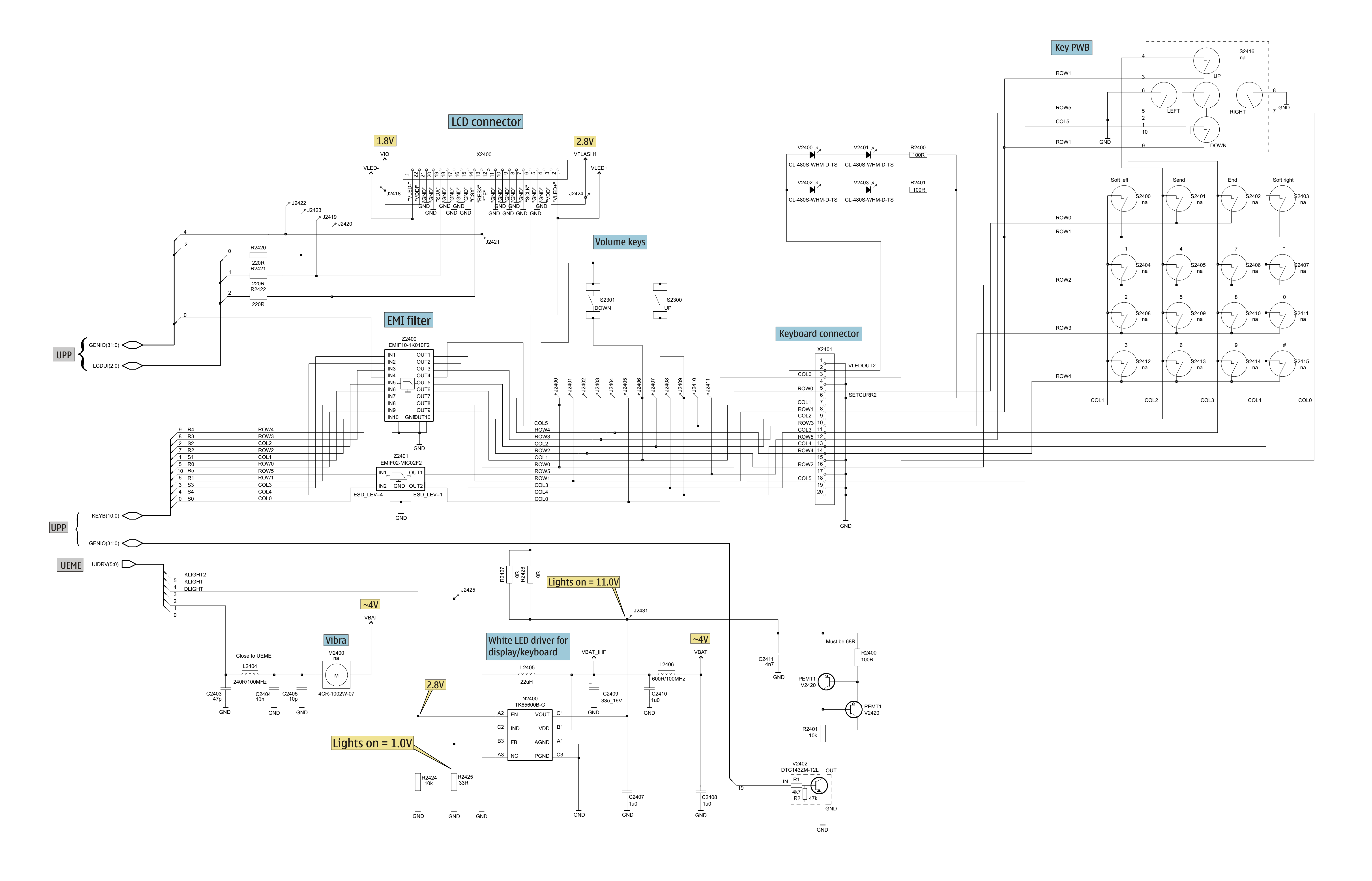
C1481 1u0

N1470
LP3999ITLX
-1.8_NOPB

VEN VIN CBYP VOUT GND

C1482 4u7

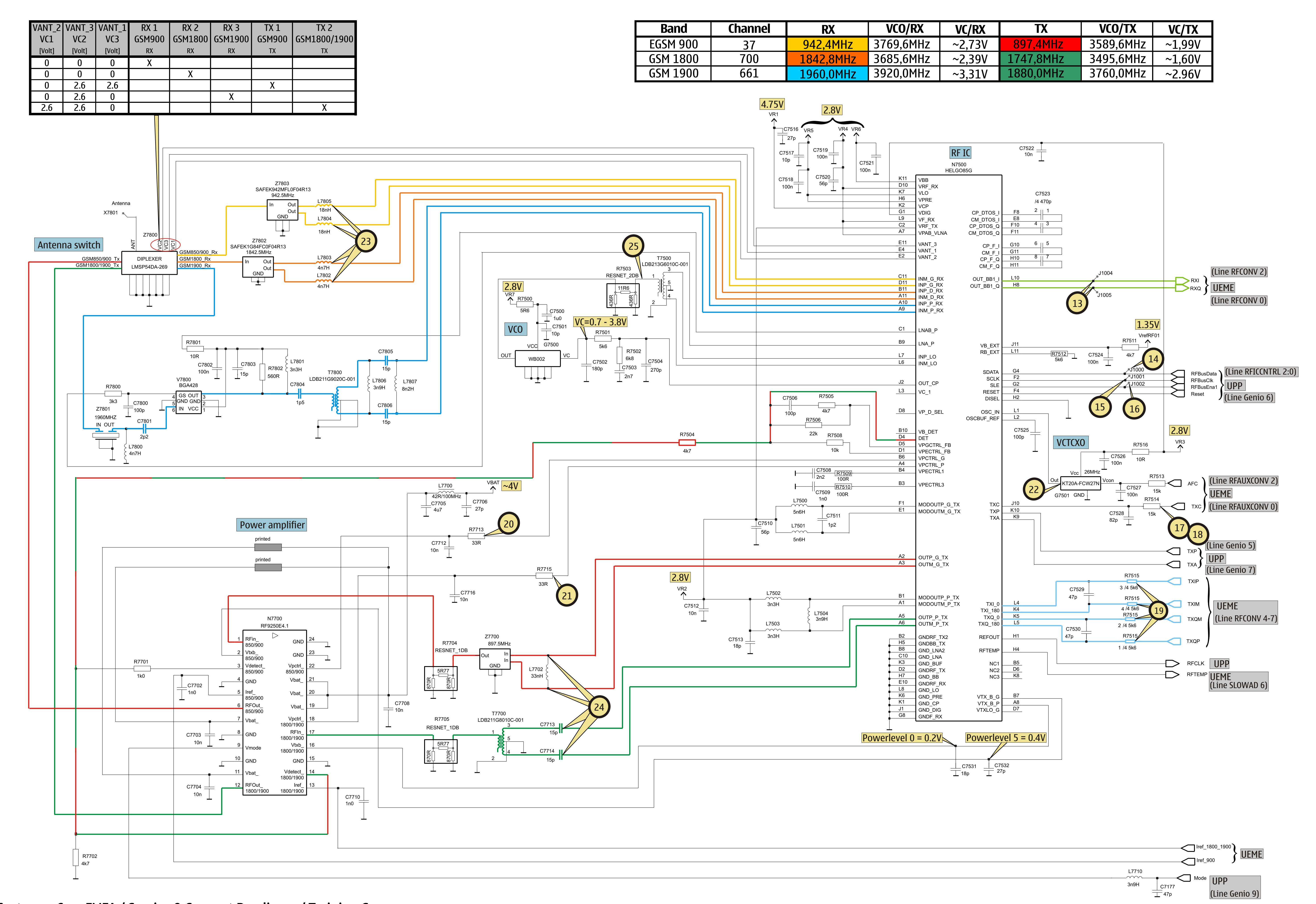
1.8V VCAMDIG

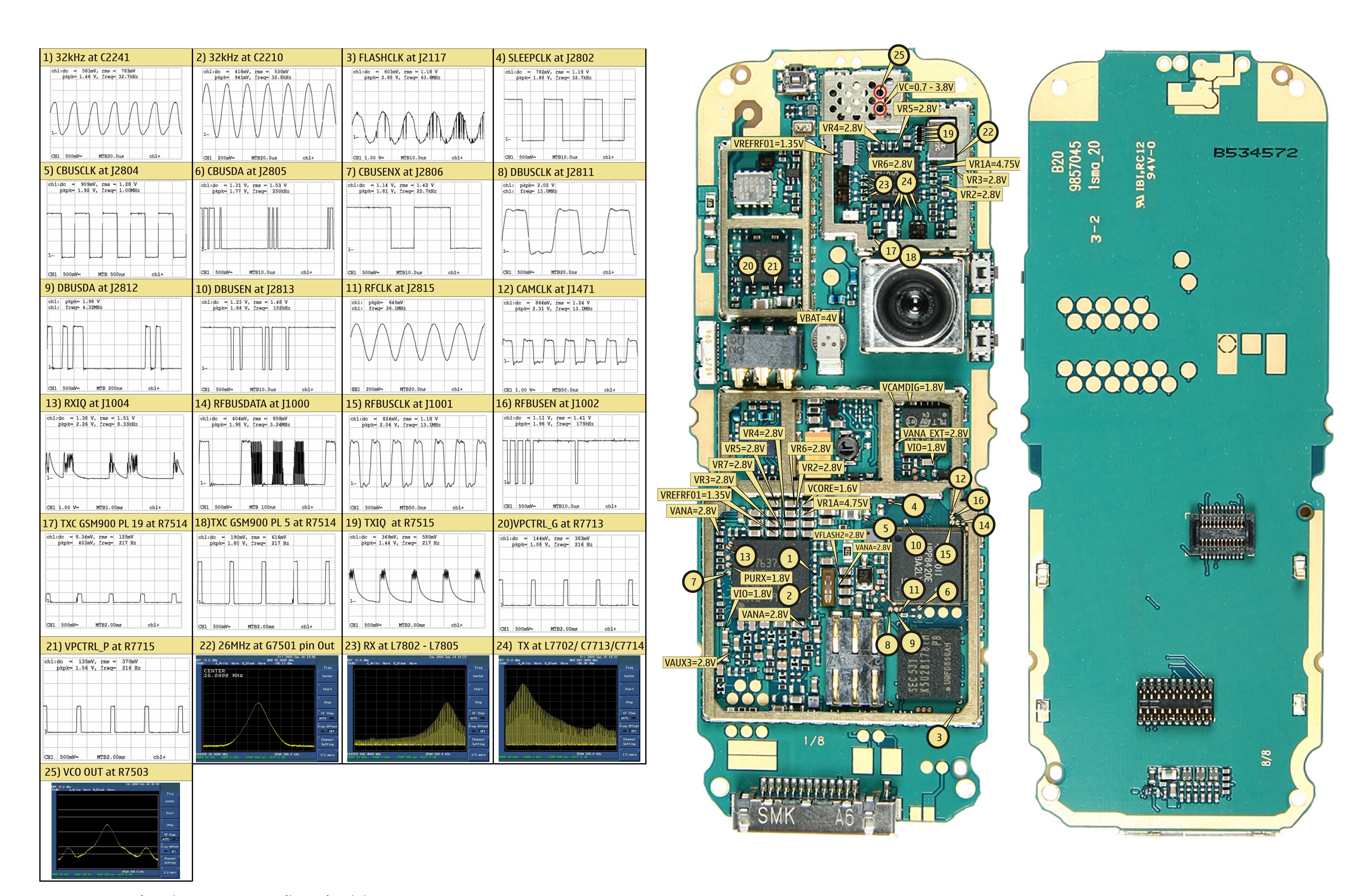


Key PWB
LCD connector
1.8V
2.8V
Volume keys
EMI filter
Keyboard connector
UPP
UPP
UEME
~4V
Vibra
White LED driver for display/keyboard
~4V
2.8V
Lights on = 11.0V
Lights on = 1.0V

VANT_2 VC1 [Volt]	VANT_3 VC2 [Volt]	VANT_1 VC3 [Volt]	RX 1 GSM900 RX	RX 2 GSM1800 RX	RX 3 GSM1900 RX	TX 1 GSM900 TX	TX 2 GSM1800/1900 TX
0	0	0	X				
0	0	0		X			
0	2.6	2.6				X	
0	2.6	0			X		
2.6	2.6	0					X

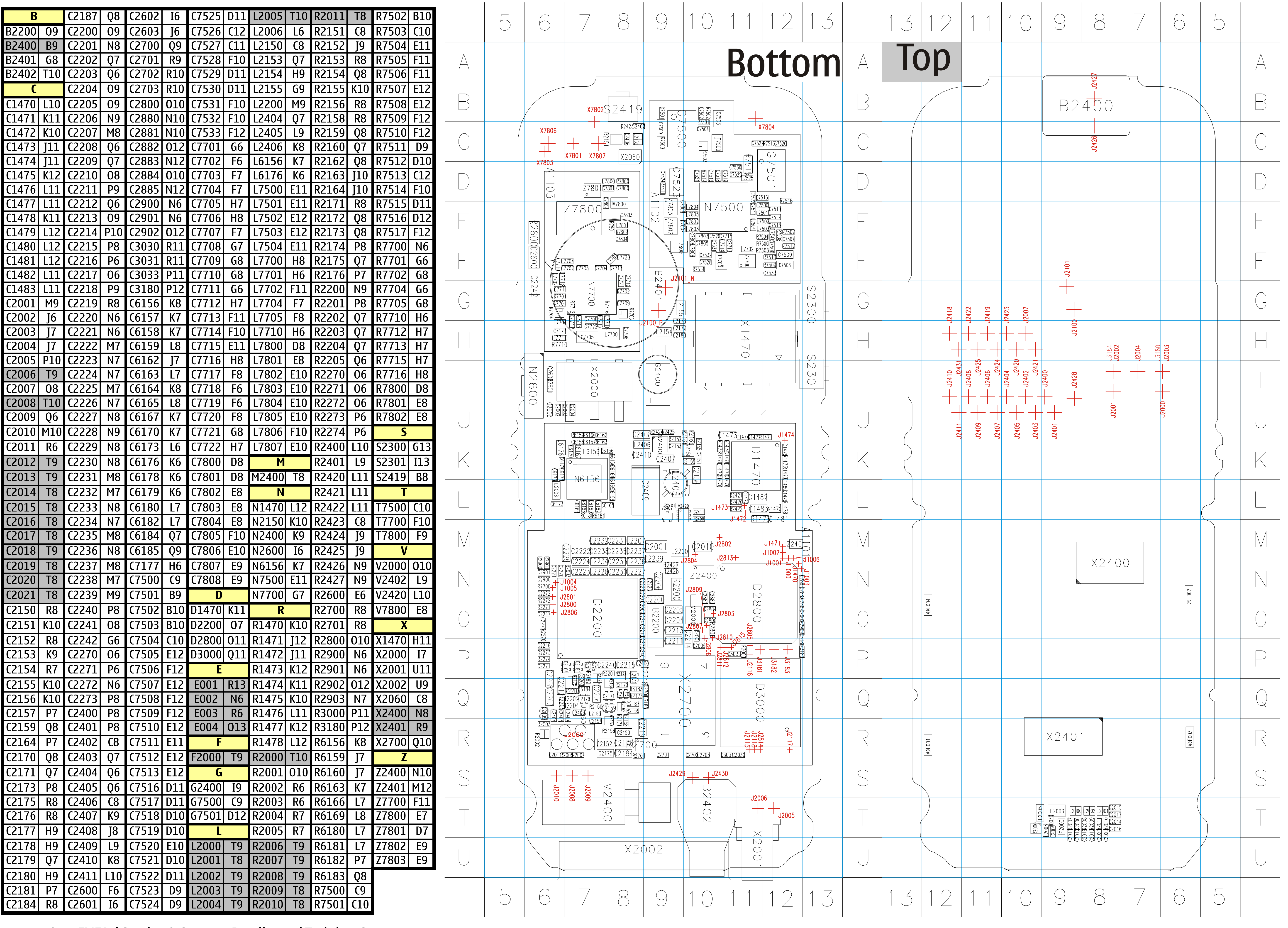
Band	Channel	RX	VCO/RX	VC/RX	TX	VCO/TX	VC/TX
EGSM 900	37	942,4MHz	3769,6MHz	~2,73V	897,4MHz	3589,6MHz	~1,99V
GSM 1800	700	1842,8MHz	3685,6MHz	~2,39V	1747,8MHz	3495,6MHz	~1,60V
GSM 1900	661	1960,0MHz	3920,0MHz	~3,31V	1880,0MHz	3760,0MHz	~2.96V





1) 32kHz at C2241
2) 32kHz at C2210
3) FLASHCLK at J2117
4) SLEEPCLK at J2802
5) CBUSCLK at J2804
6) CBUSDA at J2805
7) CBUSENX at J2806
8) DBUSCLK at J2811
9) DBUSDA at J2812
10) DBUSEN at J2813
11) RFCLK at J2815
12) CAMCLK at J1471
13) RXIQ at J1004
14) RFBUSDATA at J1000
15) RFBUSCLK at J1001
16) RFBUSEN at J1002
17) TXC GSM900 PL 19 at R7514
18)TXC GSM900 PL 5 at R7514
19) TXIQ at R7515
20)VPCTRL_G at R7713
21) VPCTRL_P at R7715
22) 26MHz at G7501 pin Out
23) RX at L7802 - L7805
24) TX at L7702/ C7713/C7714
25) VCO OUT at R7503
VC=0.7 - 3.8V
VR5=2.8V
VR4=2.8V
VREFRF01=1.35V
VR6=2.8V
VR1A=4.75V
VR3=2.8V
VR2=2.8V
VBAT=4V
VCAMDIG=1.8V
VANA_EXT=2.8V
VIO=1.8V
VR4=2.8V
VR5=2.8V
VR6=2.8V
VR7=2.8V
VR2=2.8V
VR3=2.8V
VCORE=1.6V
VREFRF01=1.35V
VR1A=4.75V
VANA=2.8V
VFLASH2=2.8V
VANA=2.8V
PURX=1.8V
VIO=1.8V
VANA=2.8V
VAUX3=2.8V
SMK
1/8
8/8
B534572
B20
9857045
1sma_20
3-2

B		C2187	Q8	C2602	I6	C7525	D11	L2005	T10	R2011	T8	R7502	B10
B2200	O9	C2200	O9	C2603	J6	C7526	C12	L2006	L6	R2151	C8	R7503	C10
B2400	B9	C2201	N8	C2700	Q9	C7527	C11	L2150	C8	R2152	J9	R7504	E11
B2401	G8	C2202	Q7	C2701	R9	C7528	F10	L2153	Q7	R2153	R8	R7505	F11
B2402	T10	C2203	Q6	C2702	R10	C7529	D11	L2154	H9	R2154	Q8	R7506	F11
C		C2204	O9	C2703	R10	C7530	D11	L2155	G9	R2155	K10	R7507	E12
C1470	L10	C2205	O9	C2800	O10	C7531	F10	L2200	M9	R2156	R8	R7508	E12
C1471	K11	C2206	N9	C2880	N10	C7532	F10	L2404	Q7	R2158	R8	R7509	F12
C1472	K10	C2207	M8	C2881	N10	C7533	F12	L2405	L9	R2159	Q8	R7510	F12
C1473	J11	C2208	Q6	C2882	O12	C7701	G6	L2406	K8	R2160	Q7	R7511	D9
C1474	J11	C2209	Q7	C2883	N12	C7702	F6	L6156	K7	R2162	Q8	R7512	D10
C1475	K12	C2210	O8	C2884	O10	C7703	F7	L6176	K6	R2163	J10	R7513	C12
C1476	L11	C2211	P9	C2885	N12	C7704	F7	L7500	E11	R2164	J10	R7514	F10
C1477	L11	C2212	Q6	C2900	N6	C7705	H7	L7501	E11	R2171	R8	R7515	D11
C1478	K11	C2213	O9	C2901	N6	C7706	H8	L7502	E12	R2172	Q8	R7516	D12
C1479	L12	C2214	P10	C2902	O12	C7707	F7	L7503	E12	R2173	Q8	R7517	F12
C1480	L12	C2215	P8	C3030	R11	C7708	G7	L7504	E11	R2174	P8	R7700	N6
C1481	L12	C2216	P6	C3031	R11	C7709	G8	L7700	H8	R2175	Q7	R7701	G6
C1482	L11	C2217	O6	C3033	P11	C7710	G8	L7701	H6	R2176	P7	R7702	G8
C1483	L11	C2218	P9	C3180	P12	C7711	G6	L7702	F11	R2200	N9	R7704	G6
C2001	M9	C2219	R8	C6156	K8	C7712	H7	L7704	F7	R2201	P8	R7705	G8
C2002	J6	C2220	N6	C6157	K7	C7713	F11	L7705	F8	R2202	Q7	R7710	H6
C2003	J7	C2221	N6	C6158	K7	C7714	F10	L7710	H6	R2203	Q7	R7712	H7
C2004	J7	C2222	M7	C6159	L8	C7715	E11	L7800	D8	R2204	Q7	R7713	H7
C2005	P10	C2223	N7	C6162	J7	C7716	H8	L7801	E8	R2205	Q6	R7715	H7
C2006	T9	C2224	N7	C6163	L7	C7717	F8	L7802	E10	R2270	O6	R7716	H8
C2007	O8	C2225	M7	C6164	K8	C7718	F6	L7803	E10	R2271	O6	R7800	D8
C2008	T10	C2226	N7	C6165	L8	C7719	F6	L7804	E10	R2272	O6	R7801	E8
C2009	Q6	C2227	N8	C6167	K7	C7720	F8	L7805	E10	R2273	P6	R7802	E8
C2010	M10	C2228	N9	C6170	K7	C7721	G8	L7806	F10	R2274	P6	**S**	
C2011	R6	C2229	N8	C6173	L6	C7722	H7	L7807	E10	R2400	L10	S2300	G13
C2012	T9	C2230	N8	C6176	K6	C7800	D8	**M**		R2401	L9	S2301	I13
C2013	T9	C2231	M8	C6178	K6	C7801	D8	M2400	T8	R2420	L11	S2419	B8
C2014	T8	C2232	M7	C6179	K6	C7802	E8	**N**		R2421	L11	**T**	
C2015	T8	C2233	N8	C6180	L7	C7803	E8	N1470	L12	R2422	L11	T7500	C10
C2016	T8	C2234	N7	C6182	L7	C7804	E8	N2150	K10	R2423	C8	T7700	F10
C2017	T8	C2235	M8	C6184	Q7	C7805	F10	N2400	K9	R2424	J9	T7800	F9
C2018	T9	C2236	N8	C6185	Q9	C7806	E10	N2600	I6	R2425	J9	**V**	
C2019	T8	C2237	M8	C7177	H6	C7807	E9	N6156	K7	R2426	N9	V2000	O10
C2020	T8	C2238	M7	C7500	C9	C7808	E9	N7500	E11	R2427	N9	V2402	L9
C2021	T8	C2239	M9	C7501	B9	**D**		N7700	G7	R2600	E6	V2420	L10
C2150	R8	C2240	P8	C7502	B10	D1470	K11	**R**		R2700	R8	V7800	E8
C2151	K10	C2241	O8	C7503	B10	D2200	O7	R1470	K10	R2701	R8	**X**	
C2152	R8	C2242	G6	C7504	C10	D2800	O11	R1471	J12	R2800	O10	X1470	H11
C2153	K9	C2270	O6	C7505	E12	D3000	Q11	R1472	J11	R2900	N6	X2000	I7
C2154	R7	C2271	P6	C7506	F12	**E**		R1473	K12	R2901	N6	X2001	U11
C2155	K10	C2272	N6	C7507	E12	E001	R13	R1474	K11	R2902	O12	X2002	U9
C2156	K10	C2273	P8	C7508	F12	E002	N6	R1475	K10	R2903	N7	X2060	C8
C2157	P7	C2400	P8	C7509	F12	E003	R6	R1476	L11	R3000	P11	X2400	N8
C2159	Q8	C2401	P8	C7510	E12	E004	O13	R1477	K12	R3180	P12	X2401	R9
C2164	P7	C2402	C8	C7511	E11	**F**		R1478	L12	R6156	K8	X2700	Q10
C2170	Q8	C2403	Q7	C7512	E12	F2000	T9	R2000	T10	R6159	J7	**Z**	
C2171	Q7	C2404	Q6	C7513	E12	**G**		R2001	O10	R6160	J7	Z2400	N10
C2173	P8	C2405	Q6	C7516	D11	G2400	I9	R2002	R6	R6163	K7	Z2401	M12
C2175	R8	C2406	C8	C7517	D11	G7500	C9	R2003	R6	R6166	L7	Z7700	F11
C2176	R8	C2407	K9	C7518	D10	G7501	D12	R2004	R7	R6169	L8	Z7800	E7
C2177	H9	C2408	J8	C7519	D10	**L**		R2005	R7	R6180	L7	Z7801	D7
C2178	H9	C2409	L9	C7520	E10	L2000	T9	R2006	T9	R6181	L7	Z7802	E9
C2179	Q7	C2410	K8	C7521	D10	L2001	T8	R2007	T9	R6182	P7	Z7803	E9
C2180	H9	C2411	L10	C7522	D11	L2002	T9	R2008	T9	R6183	Q8		
C2181	P7	C2600	F6	C7523	D9	L2003	T9	R2009	T8	R7500	C9		
C2184	R8	C2601	I6	C7524	D9	L2004	T9	R2010	T8	R7501	C10		



R	
R2400	E6
R2401	E4
V	
V2400	F6
V2401	E6
V2402	F4
V2403	E4